# Sea Level Rise Action Committee Vulnerability Assessment Natural Resources Workgroup

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## NATURAL RESOURCES CHAPTER OF VULNERABILITY ASSESSMENT

#### I. INTRODUCTION

- a. SLR & Natural Resources
  - i. Basic info on sea level rise and relationship to natural resources
- b. Workgroup Process & Members
  - i. Basic info on workgroup process and workgroup members
- c. Unavailable Data
  - i. Data we wanted but was not available

The following sections indicate large topic area, with the data available to assess each listed below each topic. A template has been developed for use in drafting each section.

- I. WATER RESOURCES (Marine and Freshwater Aquatic Resources?)
  - a. Salinity Changes Chris Somerfield/Hillary Stevens
    - i. Inferred head of tide layer-DCP estimates
    - ii. Shellfish maps???
    - iii. Fisheries spawning data???
  - b. Surface Water? Or Waterways
    - i. Riverine aquatic and submerged vegetation
    - ii. Non-tidal coastal plain streams
  - c. Groundwater Effects Sarah Cooksey/Kelly Valencik
    - i. Recharge areas
    - ii. Undeveloped recharge areas
    - iii. Municipal well data/wellhead protection areas
    - iv. Private well data (???)

## II. WETLANDS – Floodplains and headwaters

- a. Tidal Chris Bason/Jennifer Adkins
  - i. Saltwater Tidal
    - 1. Spartina high salt marsh
    - 2. Spartina low salt marsh (not mapped)
  - ii. Freshwater Tidal
    - 1. Freshwater tidal wetlands(forest and shrub check with Bill)
    - 2. Mixed broadleaf freshwater tidal marsh

- 3. Freshwater intertidal quillwart flat (or with aquatic?)
  b. Non-tidal

  i. Emergent and shrub Robin Tyler
  1. Coastal plain seasonal pond
  2. Mixed herb deep peat wetland
  - ii. Forested Mike Stroeh
    - 1. Atlantic white cedar wetlands
    - 2. Bald Cypress wetlands
    - 3. Black ash seepage swamp
- c. Impoundments
  - i. Impoundments layer
- III. BEACHES and DUNES (Could move this section above Wetlands; spatially that makes sense, but keeping Wetlands right after Water is good too. I could go either way.)
  - a. Beach and dune
  - b. Interdunal wetlands (isolated, only found in beach/dune dynamic matrix and nowhere else)
- IV. UPLAND FOREST
  - i. Deciduous, Evergreen, Mixed
    - 1. Ancient sand ridge forest
    - 2. Tulip tree rich woods
- V. FLORA and FAUNA (summary of impacts, highlights would also be addressed in each habitat type)
  - a.
- i.
- b. Animal (SGCN) Species Kevin Kalasz summarize based on habitat?
  - i. State rare
  - ii. Globally rare
  - iii. Federally listed
- c. Plant Species Bill McAvoy need EOR impacts, not just flora
  - i. State rare
  - ii. Globally rare
  - iii. Federally listed
- d.
- i.
- VI. NATURAL RESOURCE CONSERVATION LANDS
  - a. Natural Areas and Nature Preserve Tricia Arndt/Eileen Butler
    - i. 2006 Natural Areas inventory
    - ii. DNREC Parks nature preserve layer

- b. Conservation easements Brenna Goggin/Roger Jones
  - i. DNREC Parks conservation easement layer (includes NGO lands)
- c. NGO-owned lands? TNC, DNS, DWL, Brandywine Conservancy, others?
- d. Local / County Parks
- e. Wildlife Refuges Susan Guiteras
  - i. Prime Hook and Bombay Hook NWR
- f. State Parks/Wildlife Areas/State Forests/DNERR- Functions and purposes are different, may want to separate into different worksheets, not sure.
  - i. DNREC State Parks layer
  - ii. DNREC State Wildlife Areas layer
  - iii. DNREC DNERR
  - iv. DDA State Forests

## VII. AGRICULTURE Pam Thornburg/Morgan Ellis

- a. Land Use Land Cover
  - i. LULC data for agriculture which includes fields, truck crops, CAFO and open pasture.
- b. High Productivity
  - i. Areas of high productivity based on soils data.
- c. Preservation & Conservation
  - Agricultural land preservation districts and agricultural conservation easements
- Ancient sand ridge forest
- Atlantic white cedar wetlands
- Bald Cypress wetlands
- Beach and Dune
- Bishop weed mixed species brackish marsh
- Black ash seepage swamp
- Coastal plain seasonal pond
- Freshwater intertidal quillwart flat
- Freshwater tidal wetlands
- Interdunal Wetlands
- Mixed broadleaf freshwater tidal marsh
- Mixed herb deep peat wetland
- Riverine aquatic and submerged vegetation
- Spartina high salt marsh
- Tulip tree rich woods
- Non-tidal coastal plain streams